

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 100:68583

=> => fil uspatall FILE 'USPATFULL' ENTERED AT 11:26:30 ON 21 DEC 2003 CA INDEXING COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 11:26:30 ON 21 DEC 2003 CA INDEXING COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

=> d l19 bib abs hitstr

L19 ANSWER 1 OF 1 USPATFULL on STN 1999:143299 USPATFULL AN ΤI Selective denial of encrypted high precision data by indirect keying Clark, James Monroe, Verona, NJ, United States IN ITT Corporation, New York, NY, United States (U.S. corporation) PA 19991109 PΙ US 5982897 US 1998-95623 19980610 (9) ΑI Continuation of Ser. No. US 1995-429519, filed on 26 Apr 1995, now RLI abandoned DΤ Utility FS Granted Primary Examiner: Hayes, Gail O.; Assistant Examiner: Sayadian, Hrayr A. EXNAM LREP Plevy, Arthur L. CLMN Number of Claims: 24 ECL Exemplary Claim: 21 4 Drawing Figure(s); 3 Drawing Page(s) DRWN LN.CNT 655 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AB.

High precision transmitted navigational data as encrypted data transmitted by global positioning (GPS) satellites is made unavailable in regions designated as hostile and during desired intervals, while allowing the data to be available outside the hostile region. All satellites in the GPS constellation transmit the high precision navigational data in encrypted form. However, only the satellites that are not visible to the hostile region transmit the periodic key necessary to decrypt the data. The periodic key changes after a predetermined time interval. During a given time interval the same key value is used by all satellites for encryption of the high precision navigational data. A receiver can obtain the current periodic key from any visible satellite which is transmitting the periodic key. This key is then used to decrypt the high precision navigational data from that satellite and all other visible satellites. As a result, users in the

hostile region are denied access to the high precision navigational data because they are unable to obtain the periodic key necessary to decrypt the data.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 258278-72-7P, EM 1926

(preparation of steroids as inhibitors of type 3 3α -hydroxysteroid dehydrogenase)

RN 258278-72-7 USPATFULL

Absolute stereochemistry.

=> fil hcaplus FILE 'HCAPLUS' ENTERED AT 11:26:39 ON 21 DEC 2003 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

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FILE COVERS 1907 - 21 Dec 2003 VOL 139 ISS 26 FILE LAST UPDATED: 19 Dec 2003 (20031219/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all hitstr tot 131

L31 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2000:116882 HCAPLUS

DN 132:152024

ED Entered STN: 18 Feb 2000

TI Preparation of steroids as inhibitors of type 3 3α -hydroxysteroid dehydrogenase

IN Labrie, Fernand; Merand, Yves; Gauthier, Sylvain; Provencher, Louis; Luu-The, Van

PA Endorecherche, Inc., Can.

greater aromatic hydroxylation but the catecholestrogen was 0-methylated to a greater relative extent. The 16β -17 β derivative underwent alicyclic as well as substantial aromatic hydroxylation and yielded numerous isomeric glucuronides of 0-methylated catechols. Thus, the fluorine exerted complex effects (inhibitory and enhancing) on both localized (D-ring) and distal (A-ring) biotransformations of the estradiol mol.; the direction and magnitude of the effects being dependent upon the stereochem. at C-16 and C-17. These findings provide structural guidelines for restricting the metabolism of tumor-imaging fluoroestrogens and thereby enhancing their delivery to the target tissue.

ST fluoroestradiol prepn metab estrogen receptor imaging

IT Drug metabolism

Imaging agents

Structure-activity relationship

Substituent effects

(metabolism of 16-fluoroestradiols in vivo: chemical strategies for restricting oxidative biotransformations of estrogen-receptor imaging agent)

IT Estrogen receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (metabolism of 16-fluoroestradiols in vivo: chemical strategies for restricting oxidative biotransformations of estrogen-receptor imaging agent)

IT 84693-92-5P 92817-10-2P 92817-11-3P 202397-89-5P 202397-90-8P 202397-91-9P

RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)

(metabolism of 16-fluoroestradiols in vivo: chemical strategies for restricting oxidative biotransformations of estrogen-receptor imaging agent)

IT 202397-92-0 202397-93-1 202397-94-2 202397-95-3

202397-96-4 202397-97-5 202397-98-6 202397-99-7

202398-00-3 202398-01-4 202398-02-5 202398-03-6 202398-04-7

202398-05-8 202398-06-9 202398-07-0 202398-08-1

202398-09-2

RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)

(metabolism of 16-fluoroestradiols in vivo: chemical strategies for restricting oxidative biotransformations of estrogen-receptor imaging agent)

IT 53-16-7, Estrone, reactions 3459-26-5

RL: RCT (Reactant); RACT (Reactant or reagent) (metabolism of 16-fluoroestradiols in vivo: chemical strategies for restricting oxidative biotransformations of estrogen-receptor imaging agent)

IT 130409-74-4P 130409-84-6P 202397-83-9P 202397-84-0P 202397-85-1P 202397-86-2P 202397-87-3P 202397-88-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(metabolism of 16-fluoroestradiols in vivo: chemical strategies for restricting oxidative biotransformations of estrogen-receptor imaging agent)

RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD RE

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IT
     202397-95-3 202397-99-7 202398-05-8
     RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL
     (Biological study); FORM (Formation, nonpreparative)
        (metabolism of 16-fluoroestradiols in vivo: chemical strategies for
        restricting oxidative biotransformations of estrogen-receptor imaging
     202397-95-3 HCAPLUS
RN
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 β -D-Glucopyranosiduronic acid, $(16\alpha, 17\beta)$ -16-fluoro-3,17-dihydroxyestra-1,3,5(10)-trien-2-yl (9CI) (CA INDEX NAME)

Absolute stereochemistry.

CN

RN 202397-99-7 HCAPLUS

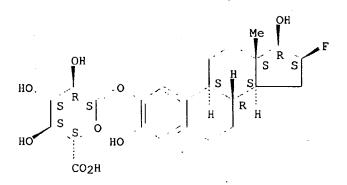
CN β-D-Glucopyranosiduronic acid, (16α,17α)-16-fluoro-3,17dihydroxyestra-1,3,5(10)-trien-2-yl (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 202398-05-8 HCAPLUS

CN β-D-Glucopyranosiduronic acid, (16β,17β)-16-fluoro-3,17-dihydroxyestra-1,3,5(10)-trien-2-yl (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1991:43278 HCAPLUS

DN 114:43278

ED Entered STN: 09 Feb 1991

TI Synthesis of 2-hydroxyestriol monoglucuronides and monosulfates

AU Ohkubo, Tadashi; Wakasawa, Tatsuyoshi; Nambara, Toshio

CS Pharm. Inst., Tohoku Univ., Sendai, 980, Japan

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SO Steroids (1990), 55(3), 128-32

CODEN: STEDAM; ISSN: 0039-128X

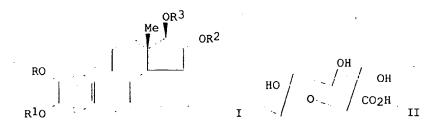
DT Journal

LA English

CC 32-3 (Steroids)

OS CASREACT 114:43276

GI
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AB The ring A monoglucuronides I (R = R2 = R3 = H, R1 = II; R = II, R1 = R2 = R3 = H) and monosulfates I (R = SO3H, R1 = R2 = R3 = H; R1 = SO3H, R = R2 = R3 = H) of 2-hydroxyestriol were synthesized from 2-hydroxyestriol 16,17-diacetate I (R = R1 = H, R2 = R3 = Ac) by means of the Koenigs-Knorr reaction with Me α-acetobromoglucuronate and sulfation with sulfur trioxide-pyridine complex, resp., followed by deacetylation. The configuration of these compds. were definitely established by conversion to 2-hydroxyestriol monomethyl esters by methylation, then enzymic hydrolysis. The ring D monoglucuronides I (R = R1 = R2 = H, R3 = II; R = R1 = R3 = H, R2 = II) and monosulfates I (R = R1 = R2 = H, R3 = SO3H; R = R1 = R3 = H, R2 = SO3H) of 2-hydroxyestriol were also prepared from 2-hydroxyestriol, 2,3-dibenzyl ether I (R = R1 = CH2Ph, R2 = R3 = H) by glucuronidation and sulfation in a similar fashion followed by debenzylation. The positions of conjugation were established on the basis of their 1H-NMR spectral data.

ST hydroxyestriol monoglucuronide monosulfate

IT Steroids, compounds

RL: SPN (Synthetic preparation); PREP (Preparation)

(hydroxy, monoglucuronides and monosulfates of hydroxyestriol, preparation of)

IT 21085-72-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(condensation of, with hydroxyestriol diacetate)

IT 111162-88-0

RL: RCT (Reactant); RACT (Reactant or reagent) (conversion to monoglucuronide or monosulfate)

IT 131429-39-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and conversion to monoglucuronide and monosulfates)

IT 116382-65-1P 131429-36-2P 131429-37-3P 131429-38-4P 131429-40-8P 131429-41-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and deacetylation of)

IT 131429-42-0P 131429-43-1P 131429-44-2P 131429-45-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and debenzylation of)

IT 55349-20-7P 55349-21-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and enzymic hydrolysis of)

IT 1236-72-2P 28818-82-8P 55349-18-3P 82356-49-8P 125529-47-7P

125529-49-9P 125549-03-3P 131435-34-2P 125529-48-8P RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

ΙT 55349-22-9 125529-46-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(sequential methylation and alkaline hydrolysis of)

ΤT 55349-22-9

RL: RCT (Reactant); RACT (Reactant or reagent) (sequential methylation and alkaline hydrolysis of)

RN 55349-22-9 HCAPLUS

 β -D-Glucopyranosiduronic acid, $(16\alpha, 17\beta)$ -3,16,17trihydroxyestra-1,3,5(10)-trien-2-yl (9CI) (CA INDEX NAME)

ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2003 ACS on STN L31

1991:722 HCAPLUS

114:722 DN

Entered STN: 12 Jan 1991 ED

Multiplicity of in vitro glucuronidation of 2-hydroxyestriol ΤI

Ohkubo, Tadashi; Takahashi, Ayako; Nambara, Toshio ΑU

Pharm. Inst., Tohoku Univ., Sendai, 980, Japan CS

Journal of Steroid Biochemistry (1990), 36(5), 501-3 SO CODEN: JSTBBK; ISSN: 0022-4731

DT Journal

English LA

2-4 (Mammalian Hormones) CC

In vitro glucuronidation of 2-hydroxyestriol has been investigated by HPLC AΒ with dual-electrode coulometric detection. When incubated with a rat or dog liver microsomal preparation in the presence of UDP glucuronic acid, 2-hydroxyestriol was transformed into the 2-glucuronide together with a small amount of 16- and/or 17-glucuronides. In contrast, incubation of 2-hydroxyestriol with guinea pig liver microsomal preparation yielded the 3-glucuronide and a trace amount of the 2-glucuronide, but no ring D glucuronides. Upon pretreatment with 3-methylcholanthrene, male rat liver exhibited a marked increase in both 2- and 3-glucuronidation activities, whereas female rat liver showed an elevation only in 2-glucuronidation. In both male and female rats, pretreatment with phenobarbital caused a relatively small increase in the glucuronidation activity of the liver. In the male guinea pig, glucuronidation was not affected by pretreatment with either of the two compds. This demonstrated the multiplicity of hepatic 2-hydroxyestriol UDP-glucuronyltransferase in the rat, guinea pig, and dog.

hydroxyestriol glucuronidation; UDP glucuronyltransferase catechol ST estrogen

IT Sex

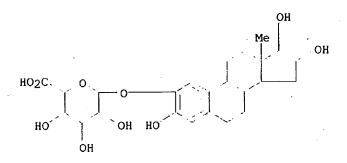
(hydroxyestriol glucuronidation by liver in relation to)

IT Liver, metabolism

(hydroxyestriol glucuronidation by, sex and species variations in)

55349-22-9 125529-46-6, 2-Hydroxyestriol 3-monoglucuronide IT

125529-47-7, 2-Hydroxyestriol 16-monoglucuronide 125529-48-8, 2-Hydroxyestriol 17-monoglucuronide RL: FORM (Formation, nonpreparative) (formation of, from 2-hydroxyestriol by liver, sex and species variations in) 1232-80-0, 2-Hydroxyestriol TΤ RL: RCT (Reactant); RACT (Reactant or reagent) (glucuronidation of, by liver, sex and species variations in) ΙT 130731-17-8 RL: BIOL (Biological study) (of liver, sex and species variations in) TT 55349-22-9 RL: FORM (Formation, nonpreparative) (formation of, from 2-hydroxyestriol by liver, sex and species variations in) 55349-22-9 HCAPLUS RN β -D-Glucopyranosiduronic acid, $(16\alpha, 17\beta)$ -3,16,17-CN trihydroxyestra-1,3,5(10)-trien-2-yl (9CI) (CA INDEX NAME)



L31 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2003 ACS on STN

1990:112186 HCAPLUS AN

DN 112:112186

Entered STN: 31 Mar 1990 ED

Studies on steroids. CCXXXXVI. Separation of isomeric 2-hydroxyestriol TΙ monoglucuronides and monosulfates by high-performance liquid chromatography with dual-electrode coulometric detection

Ohkubo, Tadashi; Wakasawa, Tatsuyoshi; Shimada, Kazutake; Nambara, Toshio AU

Pharm. Inst., Tohoku Univ., Sendai, 980, Japan CS

Journal of Liquid Chromatography (1989), 12(11), 2093-102 SO CODEN: JLCHD8; ISSN: 0148-3919

DT Journal

LA English

CC 2-1 (Mammalian Hormones)

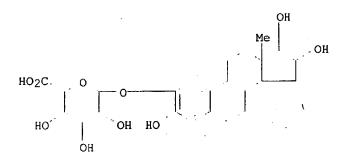
Separation and selective detection of 2-hydroxyestriol monoglucuronides and AB monosulfates by HPLC with electrochem. detection on a reversed-phase column were carried out. The effects of composition and pH of mobile phase on the capacity factor were investigated with a Develosil ODS-5 column. Four isomeric monoglucuronides of 2-hydroxyestriol appeared to be separable on this column when 0.5% NaOAc/MeCN was used as a mobile phase. However, 2-hydroxyestriol 2-glucuronide and 16-glucuronide were not satisfactorily resolved. In order to differentiate these 2, the use of a dual-electrode coulometric detector was attempted. 2-Hydroxyestriol ring D glucuronides were selectively detected at the 1st electrode $(+0.3\ V)$, while the isomeric ring A glucuronides were detected at the 2nd electrode (+0.9 V). The separation of 4 isomeric monosulfates was similarly attained on a μ-Bondasphere-NH2 column with a 0.1% KH2PO4-THF-MeCN mobile phase. ST

hydroxyestriol glucuronide sulfate chromatog; HPLC hydroxyestriol

glucuronide sulfate isomer

Chromatography, column and liquid ΙT (high-performance, dual electrode coulometry combined with, of hydroxyestriol monoglucuronide and monosulfate isomers) 55349-18-3, 2-Hydroxyestriol 2-monosulfate 55349-22-9 ΙT 82356-49-8, 2-Hydroxyestriol 3-monosulfate 125529-46-6, 2-Hydroxyestriol 125529-47-7, 2-Hydroxyestriol 16-monoglucuronide 3-monoglucuronide 125529-48-8, 2-Hydroxyestriol 17-monoglucuronide 125529-49-9, 2-Hydroxyestriol 17-sulfate 125549-03-3, 2-Hydroxyestriol 16-sulfate RL: BIOL (Biological study) (chromatog. separation of, from isomers by HPLC and dual electrode coulometry) 1232-80-0D, 2-Hydroxyestriol, monoglucuronides and monosulfates IT RL: BIOL (Biological study) (isomers, chromatog. separation of, with HPLC and dual electrode coulometry) IT 55349-22-9 RL: BIOL (Biological study) (chromatog. separation of, from isomers by HPLC and dual electrode coulometry) 55349-22-9 HCAPLUS RN β -D-Glucopyranosiduronic acid, $(16\alpha, 17\beta)$ -3,16,17-CN

trihydroxyestra-1,3,5(10)-trien-2-yl (9CI) (CA INDEX NAME)



IT

Estrogens

ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2003 ACS on STN L31 1989:633337 HCAPLUS AN DN 111:233337 Entered STN: 23 Dec 1989 ED Formylation of estrogens ΤI Pert, Derek J.; Ridley, Damon D. ΑU Dep. Org. Chem., Univ. Sydney, Sydney, 2006, Australia CS Australian Journal of Chemistry (1989), 42(3), 405-19 SO CODEN: AJCHAS; ISSN: 0004-9425 DT Journal LA English CC 32-3 (Steroids) CASREACT 111:233337 os Reimer-Tiemann formylations of estradiol and estrone were investigated AB and, while substitution was effected under certain conditions to give mixts. of 2- and 4-formyl estrogens, yields were very low and the method was unsuitable for preparative purposes. Regioselective methods were developed and 2-formylestradiol was conveniently prepared from estradiol by formylation of the lithio derivative of the bis(methoxymethyl) ether and removal of the protecting groups with HCl. 4-Formylestradiol was prepared by lithiation of the methoxyethyl ether of 4-bromoestradiol, formylation with HCONMePh, and removal of the protecting group. A number of related derivs., including 2-formylestriol, were prepared formylation estrogen; estradiol formylation; estrone formylation ST

RL: RCT (Reactant); RACT (Reactant or reagent)

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(formylation of)
     Formylation
ΙT
        (of estrogens)
     53-16-7, Estrone, reactions
IT
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (Reimer-Tiemann formylation of)
IT
     113680-59-4
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (attempted metalation-formylation of)
              113680-55-0
IT
     50-27-1
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (formylation of)
     1630-83-7
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (methoxyalkylation of)
IT
     123715-92-4P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and deacetylation of)
                   123715-83-3P 123715-90-2P
IT
     123715-82-2P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and formylation of)
                   123715-91-3P
                                  123746-55-4P
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     123715-80-0P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and hydrolysis of)
IT
     99503-86-3P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
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                  13879-55-5P 13879-56-6P
                                                              123715-81-1P
                                             123715-79-7P
TT
     6599-97-9P
     123715-84-4P
                    123715-85-5P
                                    123715-86-6P 123715-87-7P
     123715-88-8P
                    123715-89-9P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of)
IT
     123715-87-7P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of)
RN
     123715-87-7 HCAPLUS
     Estra-1,3,5(10)-triene-2-carboxaldehyde, 3,16,17-trihydroxy-,
CN
     (16\alpha, 17\beta) - (9CI) (CA INDEX NAME)
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Absolute stereochemistry.

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OHC OH S R R OH
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L31 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2003 ACS on STN

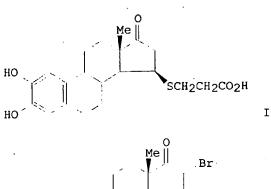
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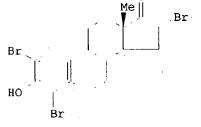
DN 110:154664

ED Entered STN: 30 Apr 1989

TI Studies on steroids. Part CCXXXIX. Preparation and antigenic properties
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of 2-hydroxyestrone-[C-15]-bovine serum albumin conjugate
     Okubo, Tadashi; Tsuchiko, Fumiko; Wakasawa, Tatsuyoshi; Nambara, Toshio
ΑU
     Pharm. Inst., Tohoku Univ., Sendai, 980, Japan
CS
     Chemical & Pharmaceutical Bulletin (1988), 36(9), 3519-24
SO
     CODEN: CPBTAL; ISSN: 0009-2363
DT
     Journal
LA
     English
CC
     32-3 (Steroids)
     Section cross-reference(s): 6, 15
     CASREACT 110:154664
os
GI
```





AB A new hapten-carrier conjugate was prepared from 15β-(2-carboxyethylthio)-2-hydroxyestrone (I) by coupling to bovine serum albumin employing the mixed anhydride technique. The specificity of anti-2-hydroxyestrone antiserum elicited in rabbits by immunization with this antigen was assessed by cross-reaction studies with related steroids in the RIA procedure and the results are discussed from the structural point of view. I was prepared from tribromoestrone II in several steps. ST hydroxyestrone serum albumin conjugate prepn antigen; estrone hydroxy

serum albumin conjugate

IT Antigens
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydroxyestrone bovine serum albumin conjugate as)
IT Molecular structure-biological activity relationship

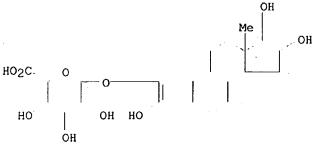
Molecular structure-biological activity relationship (antigenic, of hydroxyestrone bovine serum albumin conjugate)

IT Albumins, compounds
RL: SPN (Synthetic preparation); PREP (Preparation)
(conjugates, preparation and antigenic activity of)

II

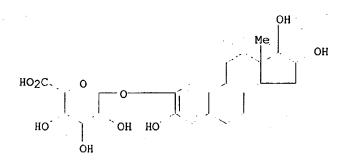
IT 50-27-1, Estriol 50-28-2, Estradiol, preparation 53-16-7, Estrone, preparation 362-05-0, 2-Hydroxyestradiol 362-06-1, 2-Hydroxyestrone 362-08-3, 2-Methoxyestrone 1035-77-4, Estradiol 3-methyl ether 1232-80-0 1474-53-9, Estriol 3-methyl ether 1624-62-0, Estrone methyl ether 3131-23-5, 4-Hydroxyestrone 5976-62-5, 4-Hydroxyestrone 3-methyl

```
5976-63-6, 2-Hydroxyestrone 3-methyl ether 16105-81-0,
    2-Hydroxyestradiol 3-sulfate 26549-41-7, 2-Hydroxyestrone 2-glucuronide
    52745-31-0 55349-22-9
                            58562-33-7, 4-Methoxyestrone
                                                                90746-95-5,
    89289-97-4
                90746-93-3, 4-Hydroxyestrone 3-glucuronide
    4-Hydroxyestradiol 4-glucuronide 90762-62-2, 4-Hydroxyestrone
     4-glucuronide
    RL: RCT (Reactant); RACT (Reactant or reagent)
        (cross-reactivity of, with anti-hydroxyestrone antiserum)
    107-21-1P, 1,2-Ethanediol, preparation
    RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
        (cyclic ketalization by, of tribromoestrone)
    79258-15-4
    RL: RCT (Reactant); RACT (Reactant or reagent)
        (cyclic ketalization of, with ethylene glycol)
IT
    119830-38-5P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and addition reaction of, with mercaptopropionic acid)
ΙT
     119830-41-0P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation and binding of, with bovine serum albumin)
     119830-39-6P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and debromination of)
     119830-33-0P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and dehydrobromination of)
ΙT
     119830-34-1P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and deketalization of)
IT
     119830-37-4P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and oxidation of)
     119830-35-2P
IT
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and reaction of, with sodium nitrite)
     119830-36-3P
IT
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and reduction of)
                    119830-42-1P
IT
     119830-40-9P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of)
     55349-22-9
     RL: RCT (Reactant); RACT (Reactant or reagent)
         (cross-reactivity of, with anti-hydroxyestrone antiserum)
     55349-22-9 HCAPLUS
RN
     \beta-D-Glucopyranosiduronic acid, (16\alpha, 17\beta)-3,16,17-
CN
     trihydroxyestra-1,3,5(10)-trien-2-yl (9CI) (CA INDEX NAME)
```



```
L31
    ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2003 ACS on STN
     1988:529502 HCAPLUS
AN
     109:129502
DN
ED
     Entered STN:
                  14 Oct 1988
ΤI
     Studies on steroids. CCXXXVI. New synthesis of 2-hydroxyestrogen
     2-monoglucuronides
ΑU
     Okubo, Tadashi; Tsuchiko, Fumiko; Nambara, Toshio
CS
     Pharm. Inst., Tohoku Univ., Sendai, 980, Japan
SO
     Chemical & Pharmaceutical Bulletin (1988), 36(1), 419-23
     CODEN: CPBTAL; ISSN: 0009-2363
DT
     Journal
LA
     English
CC
     33-3 (Carbohydrates)
     Section cross-reference(s): 32
OS
     CASREACT 109:129502
     New synthetic routes leading to catechol estrogen 2-monoglucuronides are
AB
     described. Thus, 4-bromo-2-hydroxyestriol 16,17-diacetate via
     Koenigs-Knorr reaction with Me \alpha-acetobromoglucuronate in the
     presence of CdCO3 proceeded preferentially toward the C-2 hydroxyl group.
     Subsequent reductive dehalogenation followed by alkaline hydrolysis gave the
     desired 2-hydroxyestriol 2-glucuronide. Similarly, 2-hydroxyestradiol and
     2-hydroxyestrone 2-glucuronides were prepared
ST
     estratriene glucuronide
IT
     805-26-5
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (bromination of)
ΙT
     88623-44-3
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (periodate oxidation of)
ΙT
     116382-70-8P
                    116382-71-9P
                                   116436-60-3P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and enzymic hydrolysis of)
IT
                   116382-67-3P
     116382-64-0P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and hydrogenolysis of)
TΨ
     27736-76-1P
                   53048-13-8P 116408-03-8P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and methylation of)
IΤ
     116382-62-8P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and periodate oxidation of)
IT
                    116382-66-2P
     116382-63-9P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
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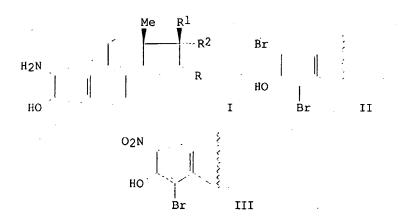
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(preparation and reaction with glucuronate derivative)
IT
     116382-60-6P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and reaction with sodium nitrite)
ΙT
     53048-12-7P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and reactions of)
TT
     116382-61-7P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and reduction of)
IT
     116382-65-1P
                   116382-68-4P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and saponification of)
ΙT
     5976-63-6P 5976-65-8P 28818-82-8P
                                              116382-69-5P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of)
     21085-72-3
ΤŤ
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with steroids)
TT
     116408-03-8P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and methylation of)
RN
     116408-03-8 HCAPLUS
CN
     \beta-D-Glucopyranosiduronic acid, (16\alpha, 17\beta)-3,16,17-
     trihydroxyestra-1,3,5(10)-trien-2-yl, monosodium salt (9CI)
                                                                    (CA INDEX
     NAME)
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• Na

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ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2003 ACS on STN
L31
ΑN
     1984:68583 HCAPLUS
DN
     100:68583
ED
     Entered STN: 12 May 1984
TI
     Novel and regiospecific synthesis of 2-amino estrogens via Zincke
ΑU
     Numazawa, Mitsuteru; Kimura, Katsuhiko
     Tohoku Coll. Pharm., Sendai, 983, Japan
CS
SO
     Steroids (1983), 41(5), 675-82
     CODEN: STEDAM; ISSN: 0039-128X
DT
     Journal
LA
     English
```

CC 32-3 (Steroids)



AB Aminoestrogens I (R = H, HO; R1 = HO, R2 = H; R1R2 = O) were prepared Dibromoestrogens II were regiospecifically converted to the 2-nitro-4-bromo derivative III in quant. yields with Zincke nitration using sodium nitrite. Catalytic hydrogenation of III over Pd/C gave directly the desired 2-amino estrogens in high yields. I (R = H, HO; R1 = HO, R2 = H) were also obtained by reduction of the corresponding 2-nitro-4-bromides with NaBH4 in the presence of PdC12.

ST amino estrogen; Zincke nitration regiochem bromoestrogen

IT Regiochemistry

(of Zincke nitration, of dibromo estrogens)

IT 19-Norsteroids

RL: RCT (Reactant); RACT (Reactant or reagent)

(regioselective Zincke nitration of dibromo estrogens)

IT Nitration

(Zincke, regioselective, of dibromo estrogens)

IT 25975-57-9P 88623-41-0P 88623-42-1P 88623-43-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reduction of)

IT 6301-87-7P 14984-43-1P 88599-95-5P 88599-96-6P 88623-44-3P

88623-45-4P 88623-46-5P 88623-47-6P RL: SPN (Synthetic preparation); PREP (Preparation)

SPN (Synthetic preparation); PREP (Preparation) (preparation of)

IT 19590-54-6 19590-55-7 60788-62-7 79258-14-3

RL: RCT (Reactant); RACT (Reactant or reagent)
 (regioselective Zincke nitration of)

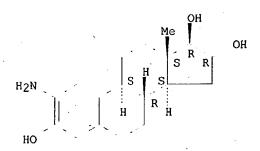
IT 88599-96-6P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

RN 88599-96-6 HCAPLUS

CN Estra-1,3,5(10)-triene-3,16,17-triol, 2-amino-, $(16\alpha,17\beta)$ - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1977:463000 HCAPLUS

DN 87:63000

ED Entered STN: 12 May 1984

TI Studies on steroids. Part CXX. Biliary conjugated metabolites of estriol in the rat

AU Nambara, Toshio; Kawarada, Yoshihiko

CS Pharm. Inst., Tohoku Univ., Sendai, Japan

SO Chemical & Pharmaceutical Bulletin (1977), 25(5), 942-8

CODEN: CPBTAL; ISSN: 0009-2363

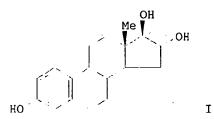
DT Journal

LA English

CC 2-2 (Hormone Pharmacology)

Section cross-reference(s): 13

GΙ



AB The conjugated metabolites excreted in rat bile following the oral administration of a large dose of estriol (I) [50-27-1] were isolated and characterized. Eleven principal conjugates were separated by chromatog. on Amberlite XAD-2 resin, followed by gel filtration on Sephadex LH-20 and partition chromatog. on silica gel. The structures of these metabolites were deduced from the physico-chemical data and definitely characterized by preparing their derivs. and comparing them with synthetic specimens. The physiol. significance of biotransformation is discussed.

ST estriol bile conjugate metabolite

IT Bile

(estriol conjugated metabolites of)

TT 1852-50-2 2479-91-6 7219-89-8 17120-96-6 55349-17-2 55349-18-3 55349-19-4 55349-20-7 55349-21-8 **55349-22-9** 55349-23-0

RL: FORM (Formation, nonpreparative)

(formation of, from estriol)

IT 50-27-1

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

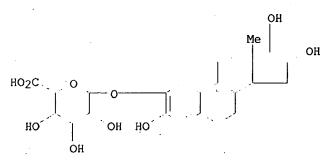
(Biological study); PROC (Process)

(metabolism of)

IT 55349-22-9

RL: FORM (Formation, nonpreparative)

(formation of, from estriol) 55349-22-9 HCAPLUS β -D-Glucopyranosiduronic acid, (16 α ,17 β)-3,16,17-trihydroxyestra-1,3,5(10)-trien-2-yl (9CI) (CA INDEX NAME)



RN

CN

```
ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2003 ACS on STN
     1975:453697 HCAPLUS
AN
DN
     83:53697
ED
     Entered STN: 12 May 1984
     Conjugated metabolites of estriol in rat bile
ΑU
     Nambara, Toshio; Kawarada, Yoshihiko
CS
     Pharm. Inst., Tohoku Univ., Sendai, Japan
     Chemical & Pharmaceutical Bulletin (1975), 23(3), 698-700
SO
     CODEN: CPBTAL; ISSN: 0009-2363
DT
     Journal
LA
     English
CC
     2-2 (Hormone Pharmacology)
     Section cross-reference(s): 13
GI
     For diagram(s), see printed CA Issue.
     After oral administration of 50 mg of estriol (I) [50-27-1] to the rat, 11
AΒ
     principal conjugates were separated from the bile. The structures of these
     metabolites were deduced from the physicochem. data and definitely
     characterized by direct comparison with the synthetic specimens.
     significance of the biotransformations observed is discussed.
ST
     estriol metabolite bile
ΙT
     Bile
        (estriol metabolites of)
     1852-50-2 2479-91-6 7219-89-8
IT
                                        17120-96-6
                                                       55349-17-2
                                                                    55349-18-3
     55349-19-4
                 55349-20-7
                              55349-21-8 55349-22-9
                                                        55349-23-0.
     RL: FORM (Formation, nonpreparative)
        (formation of, from estriol)
IT
     50-27-1
     RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
     (Biological study); PROC (Process)
        (metabolism of)
IT
     55349-22-9
     RL: FORM (Formation, nonpreparative)
        (formation of, from estriol)
RN
     55349-22-9 HCAPLUS
CN
     \beta-D-Glucopyranosiduronic acid, (16\alpha, 17\beta)-3, 16, 17-
     trihydroxyestra-1,3,5(10)-trien-2-yl (9CI) (CA INDEX NAME)
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TERMINAL (ENTER 1, 2, 3, OR ?):2
                     Welcome to STN International
                 Web Page URLs for STN Seminar Schedule - N. America
                 "Ask CAS" for self-help around the clock
                 New e-mail delivery for search results now available
NEWS
         Jun 03
NEWS
         Aug 08
                 PHARMAMarketLetter(PHARMAML) - new on STN
NEWS
         Aug 19
                 Aquatic Toxicity Information Retrieval (AQUIRE)
                 now available on STN
NEWS 6
         Aug 26
                 Sequence searching in REGISTRY enhanced
NEWS .7
         Sep 03
                 JAPIO has been reloaded and enhanced
NEWS
      8
         Sep 16
                 Experimental properties added to the REGISTRY file
NEWS
      9
         Sep 16
                 CA Section Thesaurus available in CAPLUS and CA
NEWS 10 Oct 01
                 CASREACT Enriched with Reactions from 1907 to 1985
NEWS 11
         Oct 24
                 BEILSTEIN adds new search fields
                 Nutraceuticals International (NUTRACEUT) now available on STN
NEWS 12
         Oct 24
                 DKILIT has been renamed APOLLIT
NEWS 13
         Nov 18
NEWS 14
                 More calculated properties added to REGISTRY
         Nov 25
NEWS 15
         Dec 04
                 CSA files on STN
NEWS 16 Dec 17
                 PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS 17
         Dec 17
                 TOXCENTER enhanced with additional content
NEWS 18 Dec 17
                 Adis Clinical Trials Insight now available on STN
                 Simultaneous left and right truncation added to COMPENDEX,
NEWS 19
        Jan 29
                 ENERGY, INSPEC
NEWS 20
         Feb 13 CANCERLIT is no longer being updated
NEWS 21 Feb 24 METADEX enhancements
NEWS 22 Feb 24 PCTGEN now available on STN
NEWS 23 Feb 24 TEMA now available on STN
NEWS 24 Feb 26 NTIS now allows simultaneous left and right truncation
NEWS 25 Feb 26 PCTFULL now contains images
NEWS 26 Mar 04 SDI PACKAGE for monthly delivery of multifile SDI results
         Mar 20 EVENTLINE will be removed from STN
NEWS 27
NEWS 28 Mar 24
                 PATDPAFULL now available on STN
NEWS 29 Mar 24
                 Additional information for trade-named substances without
                 structures available in REGISTRY
NEWS 30
         Apr 11
                 Display formats in DGENE enhanced
NEWS 31
         Apr 14
                 MEDLINE Reload
NEWS 32
                 Polymer searching in REGISTRY enhanced
         Apr 17
NEWS 33
                 Indexing from 1947 to 1956 added to records in CA/CAPLUS
         Jun 13
NEWS 34
                 New current-awareness alert (SDI) frequency in
         Apr 21
                 WPIDS/WPINDEX/WPIX
NEWS 35
         Apr 28
                 RDISCLOSURE now available on STN
NEWS 36
         May 05
                 Pharmacokinetic information and systematic chemical names
                 added to PHAR
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MEDLINE file segment of TOXCENTER reloaded

CHEMREACT will be removed from STN

Supporter information for ENCOMPPAT and ENCOMPLIT updated

May 15

NEWS 37

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L6
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L18
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L19
              1 S L16
     FILE 'HCAPLUS' ENTERED AT 11:19:36 ON 21 DEC 2003
L20
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L21
           5811 S L9
             16 S L20, L21 AND (AGOSTON ? OR PRIBLUDA ? OR TRESTON ? OR GREEN ?)
L22
L23
              2 S L20, L21 AND ENTREMED?/PA, CS
L24
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                SEL HIT RN
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L25

23 S E1-E23

L26 15 S L25 AND METHOXY L27 8 S L25 NOT L26

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L28 0 S L13

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FILE 'HCAPLUS' ENTERED AT 11:26:18 ON 21 DEC 2003

L30 8 S L13

L31 11 S L30, L18

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FILE 'HCAPLUS' ENTERED AT 11:26:39 ON 21 DEC 2003

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                                               XP-002186128
     - 1990:152537 HCAPLUS /
 AN
 DM
      - 112:152537
      - Kits for RIA of catechol estrogens for breast cancer diagnosis
 TI
 M
     - Kubodera, Akiko
     - Research Development Corp. of Japan, Japan
     - Jpn. Kokai Tokkyo Koho, 7 pp.
                                                                   RECEIVED
        CODEN: JKXXAF
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      - Patent
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 LA - Japanese
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                                                                 TECH CENTER 1600/2900
                                                        DATE
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                      KIND
                            DATE
                                     APPLICATION NO.
     - JP63090763
                            19880421 JP 1986-235647
 PN
                                                        19861003
        JP2517561B
                         В
                            19960724
 OS
      - MARPAT 112:152537
      - A kit for immunoassay of catechol estrogens consists of antibodies
        to I (A = :NO, O2C; n = 1-4; R = protein residue; R1, R2 = H, OH)
        and labeled catechol estrogens. 2,3-Dihydroxyestra-1,3,5(10)-trien-
        17-one was treated with carboxymethylhydroxylamine-HCl to give
        2-hydroxyestrone-17-(o-carboxymethyl)oxium, which was bound to
        bovine serum albumin for use in antibody (antiserum) prodn. A kit
        for 2-hydroxyestrone detn. consisted of this antibody and
        2-hydroxyestrone-3H.
 GI
[--00000018]
     ***120858-24-4***
IT
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        (RIA kit contg., for catechol estrogen detn.)
RN.
     120858-24-4 HCAPLUS
N
     Bstra-1,3,5(10)-triene-2,3,4-triol, labeled with tritium (9CI)
                                                                        (CA
     INDEX NAME)
Absolute stereochemistry.
[==00000019]
     ""120858-21-1"" , Estra-1,3,5(10)-triene-2,3,4-triol
RL: ANT (Analyte); ANST (Analytical study)
IT
     (detn. of, RIA kit for)
120858-21-1 HCAPLUS
RN.
ZN
     Estra-1,3,5(10)-triene-2,3,4-triol (9CI) (CA INDEX NAME)
Absolute stereochemistry.
[...00000020]
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4/5/1 DIALOG(R) File 399:CA SEARCH(R) (c) 1998 American Chemical Society. All rts. reserv. CA: 109(13)110741u PATENT 109110741 11.beta.-(4-Isopropenylphenyl)estra-4,9-dienes, procedure for their preparation, pharmaceutical preparations containing them, and their use as antigestagens INVENTOR (AUTHOR): Ottow, Eckhard; Wiechert, Rudolf; Neef, Guenter; Beier, Sybille; Elger, Walter; Henderson, David LOCATION: Fed. Rep. Ger. ASSIGNEE: Schering A.-G. PATENT: Germany Offen. ; DE 3625315 Al DATE: 880128 APPLICATION: DE 3625315 (860725) PAGES: 5 pp. CODEN: GWXXBX LANGUAGE: German CLASS: C07J-001/00A; C07C-041/00B; A61K-031/565B; A61K-031/57B; A61K-031/575B SECTION: CA232003 Steroids CA202XXX Mammalian Hormones IDENTIFIERS: progesterone antagonist estradiene prepn, antigestagen estradiene prepn DESCRIPTORS: Progestogens... inhibitors, estradiene derivs. Steroids, preparation... prepn. of estradienes as antigestagens CAS REGISTRY NUMBERS: 57-83-0 biological studies, antagonists to, estradiene derivs. as 93697-60-0 Grignard reaction of, with bromoisopropenylbenzene 6888-79-5 Grignard reaction of, with epoxyestrenol deriv. 116196-34-0P 116229-17-5P prepn. and reaction of, in synthesis of

116196-21-5P 116196-22-6P 116196-23-7P 116196-24-8P 116196-25-9P

116196-32-8P prepn. of, as antigestagen

116196-27-1P 116196-28-2P 116196-29-3P 116196-30-6P

antigestagenic estradiene deriv.

116196-26-0P

116196-31-7P

8/5/7 DIALOG(R) File 399:CA SEARCH(R) (c) 1998 American Chemical Society. All rts. reserv. CA: 74(3)10081u JOURNAL 74010081 Orally active long-acting estrogen (AY-20,121) (3-(2-propynyloxy)-estra-1,3,5(10)-trien-17.beta.-ol trimethylacetate) AUTHOR(S): Banik, Upendra K.; Revesz, Clara; Herr, Ferenc LOCATION: Ayerst Res. Lab., Montreal, Que. JOURNAL: Steroids DATE: 1970 VOLUME: 16 NUMBER: 3 PAGES: 289-96 CODEN: STEDAM LANGUAGE: English SECTION: CA804000 Hormones and Related Substances IDENTIFIERS: estrogens synthetic, contraceptives steroids DESCRIPTORS: Estrogenic hormones... (propynyloxy) estratrienol trimethylacetate

vagina...
(propynyloxy)estratrienol trimethylacetate effect on epithelium of CAS REGISTRY NUMBERS:

57-63-6 152-43-2 biol. activity of, (propynyloxy)estratrienol trimethylacetate in relation to 28002-65-5 estrogenic hormone

8/5/8
DIALOG(R)File 399:CA SEARCH(R)
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73056310 CA: 73(11)56310a PATENT

Rodenticidal 3-(2-propynyloxy) -estra-1,3,5(10)-trien-17.beta.-ol pivalate

INVENTOR (AUTHOR): Kruger/ Gunther

ASSIGNEE: American Home Products Corp.

PATENT: United States US 3496272 DATE: 700217

APPLICATION: United States DATE: 680123

PAGES: 3 pp. CODEN: USXXAM CLASS: 424-238; A 01n

SECTION:

CA832000 Steroids

IDENTIFIERS: rodenticidal propynyloxy estratrienols

DESCRIPTORS:

19-Norsteroids...

17-hydroxy-3-(2-propynyloxy) pivalate

CAS REGISTRY NUMBERS:

24099-40-9P 24894-50-6P 28002-65-5P 28151-61-3P 28275-48-1P 28275-49-2P 28275-50-5P 28425-85-6P prepn. of

8/5/9
DIALOG(R)File 399:CA SEARCH(R)
(c) 1998 American Chemical Society. All rts. reserv.
72032135 CA: 72(7)32135a PATENT

3-Alkoxy-17.alpha.-propynylestra-1,3,5(10)-trien-17.beta.-ols
INVENTOR(AUTHOR): Galantay, Eugene E.
ASSIGNEE: Sandoz Ltd.
PATENT: Germany Offen. DE 1907330 DATE: 691023
APPLICATION: United States DATE: 680219

APPLICATION: United States DATE: 680219
PAGES: 20 pp. CODEN: GWXXBX CLASS: C 07c; A 61k

SECTION:

CA832000 Steroids

IDENTIFIERS: estratrienols propynyl

DESCRIPTORS:

19-Norsteroids...

3-alkoxy

CAS REGISTRY NUMBERS:

24640-01-5P 24640-02-6P 24640-03-7P 24640-04-8P prepn. of